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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
GORTAYO, DANGELINO N

ART UNIT	PAPER NUMBER
2168	

DATE MAILED: 11/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/648,497	IDICULA ET AL.	
	Examiner	Art Unit	
	Dangelino N. Gortayo	2168	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 August 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *27 and 28* is/are allowed.

6)☒ Claim(s) *1-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *25 August 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action is response to Applicants' Amendment filed 8/21/2006.

2. Claims 1-28 are pending in this application.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-26 are rejected under 35 U.S.C. 102(e) as being anticipated by Lee et al. ("Lee" US Patent 7,031,956 B1).

As per claim 1, Lee teaches "A method of updating XML-schema-based data to conform to an updated XML schema," (see Abstract)

"the method comprising: (a) based on a first XML schema that indicates a first structure of one or more first XML attributes, (b) and one or more first values that correspond to said one or more first XML attributes,;" (Figure 1A and column 16 lines 17-32, wherein data, in the form of XML documents, includes document-type definitions indicating relationship with XML attributes) "and (c) a correlation between said one or

more first values and said one or more first XML attributes," () "generating first data that conforms to said first structure"

"and based on (a) said first data, (b) a set of one or more transformations, and (c) a correlation between one or more of said one or more first values and one or more of said one or more second XML attributes, generating second data that conforms to a second structure of one or more second XML attributes;" (column 16 lines 33-49, wherein the data is transformed when fed into the generator and optimizer to create a second new structure with new mappings)

"wherein said second structure is indicated by a second XML schema that differs from said first XML schema." (column 15 lines 1-5, wherein an optimizer creates a structure different from the first schema)

As per claim 2, Lee teaches "A method of updating XML-schema-based data to conform to an updated XML schema," (see Abstract)

"the method comprising: based on (a) a first XML schema that indicates a first structure of one or more first XML elements, (b) one or more first values that correspond to said one or more first XML elements, and (c) a correlation between said one or more first values and said one or more first XML elements, (Figure 1A and column 16 lines 17-32, wherein data, in the form of XML documents, includes document-type definitions indicating relationship with XML elements) "generating first data that conforms to said first structure;"

"and based on (a) said first data, (b) a set of one or more transformations, and (c) a correlation between one or more of said one or more first values and one or more of said one or more second XML elements, generating second data that conforms to a second structure of one or more second XML elements;" (column 16 lines 33-49, wherein the data is transformed when fed into the generator and optimizer to create a second new structure with new mappings)

"wherein said second structure is indicated by a second XML schema that differs from said first XML schema." (column 15 lines 1-5, wherein an optimizer creates a structure different from the first schema)

As per claim 3, Lee teaches "said one or more transformations are expressed in Extensible Stylesheet Language (XSL)." (column 48 lines 41-53, wherein XPath language is used, which is in the XSL family of languages for the XML standard)

As per claim 4, Lee teaches "said one or more first values are stored in one or more database tables." (column 17 lines 47-54, wherein the values from the documents are stored in tables in a relational database)

As per claim 5, Lee teaches "based on said first XML schema and one or more second values that correspond to said one or more first XML elements, generating third data that indicates said first structure and a correlation between said one or more second values and said one or more first XML elements;" (column 18 lines 4-14, wherein metadata of the document is generated that shows the relationship between the vales and the properties of data) "and based on said third data and said set of one or more transformations, generating fourth data that indicates said second structure and

a correlation between one or more of said one or more second values and one or more of said one or more second XML elements;" (column 25 lines 36-43, wherein the schema is altered for more attributes to update the data) "wherein said one or more second values differ from said one or more first values." (column 25 lines 36-43, wherein the second value differs from the first value because it is altered by the attributes and types)

As per claim 6, Lee teaches "based on a database table that corresponds to an XML element indicated by said first XML schema, generating a first Data Definition Language (DDL) statement that, when executed, will cause a database table that corresponds to said XML element to be created." (column 33 lines 64-66 and column 36 lines 7-13, wherein the mapping table is created after a CREATE statement)

As per claim 7, Lee teaches "executing said first DDL statement;" (column 57 line 29-34) "and based on said second data, inserting one or more of said one or more first values into a database table that was generated as a result of executing said first DDL statement." (column 57 lines 34-54, wherein the execution of the statement leads to mapping of the value to a relational table)

As per claim 8, Lee teaches "generating a second DDL statement that, when executed, causes effects of said first DDL statement to be reversed." (column 51 lines 15-21, wherein a validation process checks if a valid update arrives, and no changes are made till validation)

As per claim 9, Lee teaches "determining whether an error has occurred in executing said first DDL statement; and in response to determining that said error has

occurred, executing said second DDL statement." (column 51 lines 31-32, wherein a "Valid" statement is used in updating to catch any incorrect updates and no change occurs)

As per claim 10, Lee teaches "generating one or more rollback statements that, when executed, cause said inserting to be reversed." (column 51 lines 15-21, wherein a validation process checks if a valid update arrives, and no changes are made till validation)

As per claim 11, Lee teaches "determining whether an error has occurred in said inserting; and in response to determining that said error has occurred, executing said one or more rollback statements." (column 51 lines 31-32, wherein a "Valid" statement is used in updating to catch any incorrect updates and no change occurs)

As per claim 12, Lee teaches "based on said first XML schema and a third XML schema that indicates a third structure that is based on said first structure, generating a fourth XML schema that indicates said first structure and a correlation between one or more XML elements in said first structure and one or more XML elements in said third structure." (column 26 lines 35-45, wherein the mapping is nested to accommodate data generation)

As per claim 13, Lee teaches "based on an existing database table that corresponds to an XML element indicated by said first XML schema, generating a Data Definition Language (DDL) statement that, when executed, will cause a database table that corresponds to said XML element to be created;" (Figure 6 reference 126 and column 24 lines 35-49, wherein the database table corresponding to pulled elements is

created from an SQL statement) "after generating said DDL statement, performing steps comprising: deleting said first XML schema; and deleting said existing database table;" (Figure 6 reference 124, 130 and column 24 lines 37-49, wherein the table and schema are updated in a loop, deleting the first XML schema and table because it is updated) "and after deleting said first XML schema, performing steps comprising: registering said second XML schema with a database system;" (column 24 lines 39-43, wherein the table name is registered in a DTDM-Item table) "executing said DDL statement; and based on said second data, inserting one or more of said one or more first values into a database table that was generated as a result of executing said DDL statement." (column 25 lines 55-65, wherein the new schema is queried and the table is updated)

As to claims 14-26, Lee teaches a tangible computer-readable medium carrying one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in claims 1-13, respectively.

REASONS FOR ALLOWANCE

5. The following is an examiner's statement of reasons for allowance:

Claims 27-28 are allowable over the prior art of record because the prior art of record fails to teach or fairly suggest the procedure instructing the database server to execute the one or more DDL statements, thereby creating evolved database structures that are based on the evolved XML schema; and the procedure

populating one or more columns of the evolved database structures with content values of column-corresponding XML elements that are contained in the evolved XML-schema-independent instance documents.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Arguments

6. Applicant's amendment, see page 14, filed 8/21/2006, with respect to the rejection of claims 14-26 under 35 USC 101 have been fully considered and are persuasive. The rejection of claims 14-26 under 35 USC 101 has been withdrawn.

7. Applicant's arguments with respect to the 35 USC 102(e) rejection of claims 1-26 have been fully considered but they are not persuasive.

a. Applicants argument is stated as Lee does not disclose the second data, when generated, must conform to a second XML schema that differs from the first XML schema.

In response to the argument, Examiner respectfully disagrees. The examiner respectfully points to Figure 20 and column 53 lines 3-46, wherein two different documents conform to two different XML tree based on the same Document tree model. There exists a transformation between first data to second data according to a given DTD. As stated in the Applicant's argument, Lee

"shreds" the XML document and stores the content values of an XML elements into separate columns, and it is understood that every column has an identifier. By using an XML update specification (column 55 lines 15-67), the primitives to build and assist with the transformation of the document is updated, causing the second document to be different from the first document once the XML update specification is translated. Therefore Lee teaches the second data, when generated, must conform to a second XML schema that differs from the first XML schema.

b. Applicant's argument is stated as Lee does not disclose that the loaded data would be made to conform to any XML schema other than the XML schema to which the data originally conformed.

In response to the argument, Examiner respectfully disagrees. The examiner points to the previously outlined argument, wherein XML update specification causes the primitives to be updated, affecting the translation from one document to another. Additionally, the optimizer can restructure data to be read later, to ease translation (column 28 line 48 – column 29 line 30). The argument states that Lee does not disclose that the update primitives can be used to transform one XML document, which conforms to one DTD, into another XML document that conforms to another, different DTD. Examiner believes that through XML updating and the optimizer, the second data will conform to a different structure from the first source data. Therefore, Lee teaches the loaded

data would be made to conform to any XML schema other than the XML schema to which the data originally conformed.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Feng (US Publication 2004/0083218 A1)

Su et al. (US Patent 6,845,380 B2)

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dangelino N. Gortayo whose telephone number is (571)272-7204. The examiner can normally be reached on M-F 7:30-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim T. Vo can be reached on (571)272-3642. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Dangelino N. Gortayo
Examiner

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